# UNITED STATES PATENT AND TRADEMARK OFFICE
# CERTIFICATE OF CORRECTION

PATENT NO.        : 7,289,552 B2
APPLICATION NO. : 10/644361
DATED               : October 30, 2007
INVENTOR(S)       : Kwak et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

## ON THE TITLE PAGE

At section (56), FOREIGN PATENT DOCUMENTS, page 1, right column, delete line 1, and insert therefor --WO  99/40698  8/1999--.

At section (56), OTHER PUBLICATIONS, page 2, right column, line 9, after the word "Journal", delete "in" and insert therefor --on--.

## IN THE DRAWINGS

At FIG. 4B, block #56, top line, after the word "TO", delete "SLOVE" and insert therefor --SOLVE--.

At FIG. 10, block #226, top line, delete "CHOLSESKEY", and insert therefor --CHOLESKY--.

## IN THE SPECIFICATION

At column 4, line 7, before the word "function", delete "hermetian" and insert therefor --Hermitian--.

At column 4, line 61, before the words "an upper", delete "a".

At column 4, line 66, before the word "inverse", delete "a" and insert therefor --an--.

At column 5, line 24, before the word "product", delete "kronecker" and insert therefor --Kronecker--.

At column 5, line 26, after the word "elements", delete "fil" and insert therefor --$f_{il}$--.

At column 6, line 66, after the word "matrix", delete "A" and insert therefor --$\Lambda$--.

At column 7, line 44, after the word "using", delete "PFA_FFTs", and insert therefor --PFA-FFTs--.

At column 8, line 34, before "Q by K", delete "an" and insert therefor --a--.

PATENT NO.     : 7,289,552 B2                  Page 2 of 3
APPLICATION NO. : 10/644361
DATED           : October 30, 2007
INVENTOR(S)     : Kwak et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 8, line 35, before "Q by 1", delete "an" and insert therefor --a--.

At column 8, line 48, before the word "Equation", delete "decom position" and insert therefor --decomposition--.

At column 9, line 42, before the word "inverse", delete "a" and insert therefor --an--.

At column 10, line 15, before the word "received", delete "a".

At column 10, delete Equation 35 and insert therefor $--\underline{d}^{(k)} = [d_1{}^{(k)}d_2{}^{(k)} \ldots d_N{}^{(k)}]^T$, $1 \leq k \leq K$--.

At column 11, delete Equation 41, and insert therefor $--\underline{r} = [r_1{}^T\underline{r_2}{}^T \ldots \underline{r_M}{}^T]^T$--.

At column 11, line 33, after "R", insert --is--.

At column 12, line 8, after "$\underline{r}^{(m)}$, the", delete "over all" and insert therefor --overall--.

At column 12, line 23, before the word "matrix", delete "Fouriertrans form" and insert therefor --Fourier transform--.

At column 13, delete Equation 58, and insert therefor -- $A_c = \left[ A_c{}^{(1)^T} A_c{}^{(2)^T} \ldots A_c{}^{(M)^T} \right]^T$ --.

At column 13, delete 5$^{th}$ segment of Equation 59, line 34, and insert therefor $-- = F_{(K)}{}^H \underline{y}$--.

At column 13, line 67, before the words "is directly", delete "$\Lambda^{R(1)}$" and insert therefor $--\Lambda_R{}^{(1)}$--.

At column 14, delete Equation 65, and insert thereof
--Forward Substitution: Find $\underline{z}^{(1)}$ in $G^{(1)} \underline{z}^{(1)} = \underline{x}^{(1)}$, where $\underline{z}^{(1)} = G^{(1)^H} \underline{y}^{(1)}$ --.

# UNITED STATES PATENT AND TRADEMARK OFFICE
## CERTIFICATE OF CORRECTION

PATENT NO.      : 7,289,552 B2
APPLICATION NO. : 10/644361
DATED          : October 30, 2007
INVENTOR(S)    : Kwak et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 15, line 3, after "$F(r_c^{(1)})$", delete "$F(c^{(2)})$" and insert therefor --$F(r_c^{(2)})$,--.

Signed and Sealed this

Twenty-seventh Day of May, 2008

JON W. DUDAS
*Director of the United States Patent and Trademark Office*